



VCE Psychology 2013–2016

Written examination

Examination specifications

Overall conditions

The Psychology examination will be sat at a time and date to be set annually by the Victorian Curriculum and Assessment Authority.

There will be 15 minutes reading time and 2 hours 30 minutes writing time. VCAA examination rules will apply.

Details of these rules are published annually in the *VCE and VCAL Administrative Handbook*.

The examination will be marked by a panel appointed by the VCAA.

The examination will contribute 60 per cent to the Study Score.

Content

All outcomes of Units 3 and 4 will be assessed in the examination. All of the key knowledge that underpins the outcomes in Units 3 and 4, including research methodologies and ethical principles, and the underlying principles related to elements of a biopsychosocial framework, and the set of key skills listed on page 13 of the study design are examinable, except

- details related to the study of a specific mental disorder (one of: specific phobia, major depression, gambling or schizophrenia).

The examination will assess a representative sample of the key knowledge that underpins the outcomes of each unit.

The assessment of the key skills that underpin all units of the *VCE Psychology Study Design 2013–2016* will be integrated within questions assessing the key knowledge.

Each outcome will be approximately equally weighted.

Format

The examination will be presented in a question and answer book and will consist of three sections.

Section A will consist of 65 multiple-choice questions worth 1 mark each.

Section B will consist of short answer questions. Students will be required to provide answers to Section B within the spaces allocated in the examination paper. Section B will be worth 60 marks.

Section C will involve a research scenario. The research scenario may relate to one or more of the areas of study. Within Section C there will be some short answer questions relating to the scenario and one extended response question. Section C will be worth 15 marks.

The examination will be worth a total of 140 marks.

The number of lines provided after each question, together with the number of marks allocated, will indicate the appropriate length of the response. However, if students require more space they may continue their answers in the space provided at the end of the book.

Approved materials and equipment

Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.

Criteria

The extended response question in Section C will be marked according to the following criteria.

- identify and describe the key terms/theories/issues
- explain the relevant terms/theories/issues and make connections between psychological concepts/theories and data and research
- use appropriate examples/evidence/data to support the response
- interpret and analyse the issues/data/information
- evaluate issues/data/information and draw appropriate conclusions

Advice

In the *VCE Psychology Study Design 2013–2016*, research methodologies and ethical principles are integrated throughout all areas of study. In Sections A and B, questions may relate to one or more areas of study. There may also be questions about research methodologies and ethical principles. Section C will focus on research methodologies and ethical principles. The research scenario may also relate to one or more of the areas of study.

The weightings of questions in the examination will reflect approximately the weightings in the outcomes in the study design, although the examination paper will not be organised according to areas of study.

Section C: The research scenario will consist of some short answer questions and one extended response question. The extended response question in Section C will draw on students' knowledge of research and research skills.

The extended response question may

- be a research question directly related to the content of one or more than one area of study that asks students to draw on examples from their study of Psychology, and from experiments and case studies they have studied
- relate to case studies and/or research and/or experiments as well as the content of one or more than one area of study
- require students to comment on experimental design or to write up the results of a case study/experiment or to write an extended response to a question/case study/experiment. Where unfamiliar material is used, students will be expected to apply key knowledge and skills, and research methodologies and ethical principles to answer the question.

In the examination, students will be expected to have an understanding of tests of statistical significance. They will be expected to understand the significance of p values and mean, median and mode, and to draw conclusions and make generalised findings when these statistics are given. Students will not be expected to calculate any statistics in the examination.

In the following sample examination, there are two examples of the types of questions that could be included in Section C. The second example is on the last page, after the sample examination. These examples are provided to demonstrate the different styles of extended response questions. Students will not be given a choice of questions in Section C.



Victorian Certificate of Education

Year

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER

Letter

Figures

Words

PSYCHOLOGY

Written examination

Day Date

Reading time: *.** ** to *.** ** (15 minutes)

Writing time: *.** ** to *.** ** (2 hours 30 minutes)

QUESTION AND ANSWER BOOK

Structure of book

Section	Number of questions	Number of questions to be answered	Number of marks
A	65	65	65
B	18	18	60
C	4	4	15
			Total 140

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer book of 34 pages.
- Answer sheet for multiple-choice questions.
- Additional space is available at the end of the book if you need extra paper to complete an answer.

Instructions

- Write your **student number** in the space provided above on this page.
- Check that your **name** and **student number** as printed on your answer sheet for multiple-choice questions are correct, **and** sign your name in the space provided to verify this.
- All written responses must be in English.

At the end of the examination

- Place the answer sheet for multiple-choice questions inside the front cover of this book.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

SECTION A – Multiple-choice questions**Instructions for Section A**

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.

Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1, an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

Question 1

Hillary has been knitting for 20 years. She is able to knit quickly and accurately while she watches television. Her granddaughter, who is just learning how to knit, makes many mistakes if she tries to knit and watch television at the same time.

This is because

- A. Hillary is in an altered state of consciousness when she is knitting.
- B. knitting is a controlled process for Hillary and an automatic process for her granddaughter.
- C. Hillary is able to divide her attention, while her granddaughter is unable to divide her attention.
- D. Hillary is able to use selective attention to knit, while her granddaughter needs to use divided attention.

Question 2

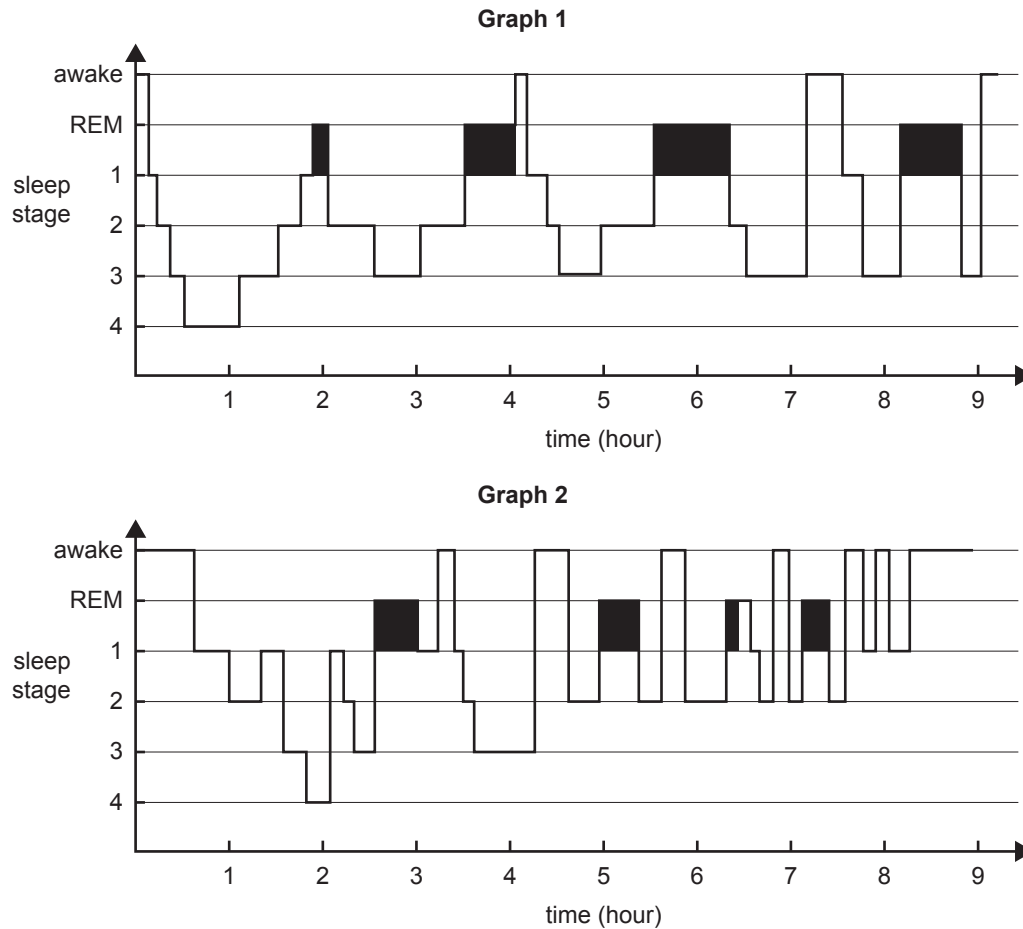
Petra was about to perform in the school musical. While she waited to go on stage, various thoughts were active in her mind, such as whether she would remember her lines, whether the sound system was working properly, if her boyfriend was in the audience and how hot she was feeling.

Petra's state of consciousness is best described as

- A. selective attention.
- B. a distortion of cognition.
- C. normal waking consciousness.
- D. an altered state of consciousness.

Use the following graphs to answer Questions 3 and 4.

The following graphs show the typical sleep cycles for two distinct age groups.



Question 3

The typical sleep cycles represented in graphs 1 and 2, in order, are

- A. infant, adolescent.
- B. infant, elderly person.
- C. elderly person, infant.
- D. adolescent, elderly person.

Question 4

According to the restorative theory of sleep, the sleeper in graph 1 spends more time in rapid eye movement (REM) sleep than the sleeper in graph 2 because

- A. they are experiencing REM rebound.
- B. their sleep/wake cycle has shifted forward due to their age.
- C. neural connections in the brain are strengthened during sleep.
- D. experiencing more deep sleep at night enhances the chance of survival.

Question 5

Mandy fell off her bicycle and suffered some mild brain damage. Doctors tested her and found that Mandy could pronounce the word 'accident' but she was unable to give a meaningful verbal description of her accident.

The doctors were most likely to conclude that the part of Mandy's brain affected was

- A. Broca's area.
- B. Wernicke's area.
- C. the parietal lobe.
- D. the occipital lobe.

Question 6

David, a professional footballer, is physically exhausted after playing in all four quarters of the Grand Final.

According to the restorative theory of sleep, in which stages of sleep would David be most likely to spend more time in the two nights of sleep following the Grand Final?

- A. REM
- B. non-rapid eye movement (NREM) stage 1
- C. non-rapid eye movement (NREM) stages 1 and 3
- D. non-rapid eye movement (NREM) stages 3 and 4

Question 7

Someone experiencing a microsleep is likely to have

- A. an awareness of the microsleep occurring.
- B. experienced significant sleep deprivation.
- C. no evident muscle tension in an electromyograph (EMG) reading.
- D. a short burst of low-frequency and high-amplitude waves on an electroencephalograph (EEG).

Question 8

Researchers have found it difficult to generalise the results of studies on humans that investigate prolonged total sleep deprivation because

- A. these studies often rely only on self report.
- B. an EEG cannot tell if someone has a microsleep.
- C. the effects of total sleep deprivation are not reversible.
- D. studying sleep deprivation often depends on convenience sampling.

NO WRITING ALLOWED IN THIS AREA

Question 9

Jason was taking part in a study of the sleep patterns of adolescents. From the ages of 11 to 24, he was required to keep a sleep diary for one month each year. In the sleep diary, he described how tired he felt during the day. In the same month, he also wore an electronic device that recorded the amount of time he spent asleep.

The researcher was collecting

- A. qualitative and quantitative data.
- B. only quantitative data.
- C. only qualitative data.
- D. experimental data.

Question 10

One criticism of the survival theory of sleep is that it does not explain why

- A. survival is enhanced by the organism being inactive in dangerous surroundings.
- B. REM sleep is important for the organism's survival.
- C. energy needs to be conserved during sleep.
- D. sleep involves a loss of awareness.

Question 11

The action of writing is controlled by

- A. the muscular nervous system.
- B. the somatic nervous system.
- C. the autonomic nervous system.
- D. the sympathetic nervous system.

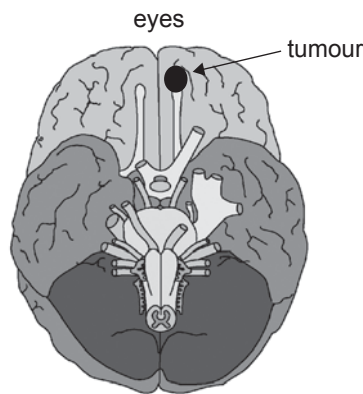
Question 12

Your heart keeps beating even though you may be unconscious because the autonomic nervous system is

- A. self-regulating and not dependent on voluntary control by the brain.
- B. self-regulating and not dependent on involuntary control by the brain.
- C. mainly controlled by the motor cortex.
- D. mainly controlled by the cerebral cortex.

Question 13

Gemma has been diagnosed with a brain tumour in a particular area of her cerebral cortex, as shown below.



human brain viewed from above

This tumour is most likely to cause Gemma to have difficulty

- A. understanding spoken language.
- B. recognising faces, songs, people and pictures.
- C. processing sensory stimuli on the left side of her body.
- D. with attention, planning and emotional control, and experience changes to her personality.

Question 14

Visual information received by the right eye is processed in the

- A. parietal lobe of the right and left hemispheres.
- B. occipital lobe of the right and left hemispheres.
- C. occipital lobe of the left hemisphere only.
- D. parietal lobe of the left hemisphere only.

Question 15

For most people, a function that is performed mainly by the right hemisphere is

- A. controlling speech.
- B. evaluating problems.
- C. recognising emotions.
- D. receiving and processing sensations from the right side of the body.

Question 16

Sally sustained a serious brain injury and, since then, has been ignoring objects and information in the left side of her world, a condition known as spatial neglect. The area of her brain most likely affected is the

- A. right frontal lobe.
- B. right parietal lobe.
- C. left primary visual cortex.
- D. left primary somatosensory cortex.

NO WRITING ALLOWED IN THIS AREA

Question 17

You are having your sleep patterns monitored in a sleep laboratory. Over a five-minute span, your EEG reading shows occasional bursts of low-frequency, high-amplitude waves. You are likely to be in

- A. stage 2 sleep.
- B. REM sleep.
- C. NREM stage 1 sleep.
- D. NREM stages 3 and 4 sleep.

Question 18

One criticism of the approach to classifying mental illness that is adopted by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) is that it

- A. involves measuring symptoms along a continuum.
- B. relies on objective physiological measures of wellbeing instead of subjective feelings.
- C. is a dimensional approach to classifying mental disorders and does not use categories to classify mental disorders.
- D. is based on symptoms reported by the person, but the person might not disclose subjective feelings, such as anxiety, unhappiness or distress.

Question 19

When a person first experiences a stressor

- A. acetylcholine is released.
- B. adrenaline and noradrenaline are released.
- C. the parasympathetic nervous system increases the person's heart rate.
- D. the sympathetic nervous system causes the person's pupils to constrict.

Use the following information to answer Questions 20–22.

Sue was very excited when she received her VCE results because they were good enough to allow her to do the course she had always wanted to do. She spent the summer holidays feeling very excited about starting university; she chose all her subjects and planned her timetable. However, when she started at university, she found it much harder than she had expected. In addition to attending classes, there were many assignments and lots of reading. She also had to work part-time to earn some money to support herself. Halfway through the semester, she developed a persistent cold and had difficulty sleeping because she was worried that she would not pass her subjects.

Question 20

During the summer holidays, she experienced

- A. distress.
- B. eustress.
- C. allostasis.
- D. adaptive plasticity.

Question 21

Sue decided to talk to her older sister and seek advice about how to balance her time, given all of her commitments.

Seeking advice from her sister is an example of

- A. eustress.
- B. allostasis.
- C. social support.
- D. cultural support.

Question 22

Sue also decided to seek help from a counsellor. The counsellor suggested that meditation would be a useful technique for Sue to use to help manage her stress.

The use of meditation helps to alleviate Sue's stress by

- A. increasing her allostatic load.
- B. activating her sympathetic nervous system.
- C. increasing the amount of cortisol in her bloodstream.
- D. reducing her level of physiological and psychological arousal.

NO WRITING ALLOWED IN THIS AREA

Use the following information to answer Questions 23–27.

Shanna has an intense fear of dogs. Shanna feels stressed whenever she sees a dog. Her heart beats faster, she feels sweaty, her mouth feels dry and she runs away from the dog. To overcome her fear of dogs, Shanna seeks the advice of a clinical psychologist.

Question 23

Shanna's reaction to dogs is called

- A. stimulus discrimination.
- B. the fight-flight response.
- C. the freeze-confront response.
- D. a parasympathetic nervous system response.

Question 24

Shanna's reaction to dogs is activated by the

- A. somatic nervous system.
- B. autonomic nervous system.
- C. sympathetic nervous system.
- D. parasympathetic nervous system.

Question 25

Shanna's heart beating faster is an example of

- A. an allostatic factor.
- B. an environmental factor.
- C. a physiological response.
- D. a psychological response.

Question 26

To treat Shanna, the psychologist could arrange for her to spend time with dogs at the Lost Dogs' Home. Shanna would have to stay in the enclosure and watch the dogs for a long period of time (rather than run away). The aim would be to replace Shanna's stress response with a learned relaxation response. This approach is known as

- A. flooding.
- B. aversion therapy.
- C. graduated exposure.
- D. spontaneous recovery.

Question 27

For Shanna's treatment to be successful, she would need to stay in the enclosure with the dogs until

- A. the dogs wag their tails.
- B. the conditioned response is extinguished.
- C. the conditioned stimulus is no longer present.
- D. there are at least eight pairings of the unconditioned stimulus and the conditioned stimulus.

Question 28

Lazarus and Folkman's Transactional Model of Stress and Coping is difficult to test experimentally because the stress response

- A. is objective.
- B. is subjective.
- C. is caused by external events.
- D. can differ between individuals.

Use the following information to answer Questions 29 and 30.

Britt has a part-time job working in a pizza shop. She finds working in the pizza shop stressful as she has to stand for long periods of time and is in a high-pressure environment. Recently, Britt's mother lost her job, so Britt has increased the number of hours she is working at the pizza shop to help her mother pay the rent and bills.

Question 29

When Britt increased the number of hours she was working at the pizza shop, it could be expected that

- A. Britt's allostatic load would increase.
- B. Britt would be less susceptible to colds and other viruses.
- C. the level of cortisol in Britt's bloodstream would decrease.
- D. the level of adrenaline in Britt's bloodstream would decrease.

Question 30

Britt's mother decided to investigate what courses she could take to increase her skills and the likelihood of obtaining another job.

Investigating available courses is an example of

- A. distress.
- B. eustress.
- C. primary appraisal.
- D. secondary appraisal.

Question 31

One night, Simon came home later than the time he had agreed with his parents. As punishment, Simon's parents confiscated his mobile phone for a month. Simon experienced considerable stress during this time, because he was out of contact with his friends.

The factor responsible for this stress was

- A. social.
- B. cultural.
- C. biological.
- D. psychological.

NO WRITING ALLOWED IN THIS AREA

Question 32

In the past three months, Rebecca has become increasingly anxious. Initially, she was anxious only when she went out of her local area. Now, she becomes anxious if she leaves her house. She is unable to go to school or go out with her friends.

Which approach to describing normality/abnormality best describes this case study?

- A. cultural approach
- B. statistical approach
- C. historical approach
- D. functional approach

Question 33

Which of the following behaviours is a learned behaviour?

- A. a baby crawling
- B. a spider spinning a web
- C. a person's fear of spiders
- D. pulling your hand away after touching a hot object

Use the following information to answer Questions 34 and 35.

Rachelle is travelling to Germany in six months' time. She has just begun learning to speak German. Each night she practises speaking German words. She finds that she remembers more German words if she practises in the study – the same room in which she has her lessons.

Question 34

Learning German by practising speaking German words will likely result in

- A. the slowing down of the transmission of neurotransmitters between synapses.
- B. the speeding up of the transmission of electrical impulses along dendrites.
- C. the strengthening of neural connections.
- D. retroactive interference.

Question 35

The improvement in Rachelle's memory of German words when she practises in the same room where she has her lessons is best explained by

- A. suppression.
- B. state-dependent cues.
- C. developmental plasticity.
- D. context-dependent cues.

Use the following information to answer Questions 36 and 37.

Meredith was born into an English-speaking family and acquired the English language in the usual way. No other languages were spoken in the home. When Meredith started high school, she studied Italian as a second language.

Question 36

In terms of the timing of experiences for learning and brain development, Meredith learning to speak English as her first language and then Italian as a second language at high school

- A. both reflect experience-expectant learning to the same degree.
- B. both reflect experience-dependent learning to the same degree.
- C. reflect experience-dependent and experience-expectant learning, respectively.
- D. reflect experience-expectant and experience-dependent learning, respectively.

Question 37

In terms of brain plasticity, it is likely that Meredith's developmental plasticity will

- A. increase with age.
- B. diminish with age.
- C. remain constant over her life span.
- D. enable her to acquire any language she is exposed to across her life span.

Use the following information to answer Questions 38 and 39.

When Spot was a puppy, he was taken to the vet several times to get his injections. Dr Brown gave the injections each time and, each time, Spot experienced pain. Since then, each time Spot is taken to the vet and sees Dr Brown, he becomes fearful and trembles.

Question 38

The type of learning experienced by Spot is best described as

- A. operant conditioning.
- B. classical conditioning.
- C. observational learning.
- D. trial-and-error learning.

Question 39

At Spot's first visit to get an injection, the sight of Dr Brown was the

- A. operant.
- B. response.
- C. neutral stimulus.
- D. conditioned stimulus.

NO WRITING ALLOWED IN THIS AREA

Question 40

Which of the following statements is correct for both classical conditioning and operant conditioning?

- A. both require reinforcement to be given before the desired response
- B. both require reinforcement to be given each time after the desired response
- C. both involve only voluntary responses
- D. both can produce stimulus generalisation and stimulus discrimination

Use the following information to answer Questions 41 and 42.

Question 41

Emma has forgotten the code to the lock on her locker. She tries several different number combinations randomly, hoping one will be the right one to unlock the padlock.

This behaviour is most likely an example of

- A. graduated exposure.
- B. motivated forgetting.
- C. trial-and-error learning.
- D. stimulus generalisation.

Question 42

Emma is unable to remember her current locker code because she confuses it with her old locker code.

Emma is experiencing

- A. retroactive interference.
- B. proactive interference.
- C. anterograde amnesia.
- D. retrograde amnesia.

Use the following information to answer Questions 43 and 44.

To encourage his noisy Year 3 students to work quietly in class, Mr Soros set up the following system with them.

- Students caught talking during quiet work time would not be allowed to play with basketballs or footballs during the following play time.
- Students who worked quietly would receive a star beside their names on a chart.
- Students who earned ten stars could exchange them for a lolly or chocolate bar of their choice.

Question 43

Not allowing students to play with basketballs and footballs during the following play time is an example of

- A. punishment.
- B. response cost.
- C. positive reinforcement.
- D. negative reinforcement.

Question 44

Allowing students to exchange ten stars for a lolly or chocolate bar of their choice is an example of

- A. shaping.
- B. a token economy.
- C. graduated exposure.
- D. fixed interval schedule of reinforcement.

Question 45

Bandura's experiments with observational learning in children indicate that

- A. those children who watched an aggressive model being reinforced were more likely to behave aggressively than those who watched an aggressive model being punished.
- B. those children who watched an aggressive model being punished were more likely to behave aggressively than those who watched an aggressive model being reinforced.
- C. those children who watched an aggressive model being reinforced were less likely to behave aggressively than those who watched an aggressive model being punished.
- D. children are more likely to learn through observational learning than operant conditioning.

Question 46

John's mother says that each time his bedroom is tidy at the end of the week, he will receive an extra dollar in his weekend spending money.

Which schedule of reinforcement is John's mother using to encourage John to keep his room tidy?

- A. fixed ratio
- B. fixed interval
- C. variable ratio
- D. variable interval

NO WRITING ALLOWED IN THIS AREA

Question 47

Maurice is a healthy 80-year-old who is not suffering from brain disease or injury.

As Maurice gets older, he is

- A. unlikely to learn new material.
- B. unlikely to experience large memory losses.
- C. likely to forget some procedural memories only.
- D. likely to perform worse on recognition tests, compared with recall tests.

Question 48

Which of the following is the least sensitive measure of retention?

- A. free recall
- B. recognition
- C. relearning
- D. cued recall

Question 49

The hippocampus is required for the consolidation of

- A. short-term memories.
- B. procedural memories.
- C. long-term declarative memories.
- D. the emotional aspects of memories.

Question 50

David, a 23-year-old university student, suffered a brain injury and sustained damage to his amygdala.

David is most likely to experience difficulty with

- A. implicit memory.
- B. explicit memory.
- C. sensory memory.
- D. semantic memory.

Question 51

Which of the following statements about short-term memory is most accurate?

- A. short-term memory holds all incoming information for around 30 minutes.
- B. short-term memory only holds information transferred from sensory memory.
- C. short-term memory holds all sensory information until it is encoded into long-term memory.
- D. short-term memory holds a limited amount of encoded information while it is being processed.

Question 52

Ethan is deciding whether to catch the bus or walk to school.

According to Baddeley and Hitch's model of working memory, the subsystem mainly responsible for Ethan's decision-making is

- A. the visuospatial sketchpad.
- B. the phonological loop.
- C. the central executive.
- D. the episodic buffer.

Question 53

Grace tripped and hit her head on a metal post. She was unconscious for a few minutes and when she recovered she could not remember anything that had occurred in the 15 minutes before she fell.

This can best be explained by

- A. a failure of consolidation.
- B. retroactive interference.
- C. proactive interference.
- D. anterograde amnesia.

Use the following information to answer Questions 54–56.

Mrs Jones wanted to help her students learn the order of the planets from the Sun. She teaches two science classes. She asked class A to construct a sentence using the first letter of each planet. Class B was shown how to take the first letter of each planet to make a word that could be pronounced.

Question 54

Which mnemonic device did Mrs Jones teach class A?

- A. narrative chaining
- B. acronym
- C. chunking
- D. acrostic

Question 55

Which mnemonic device did Mrs Jones teach class B?

- A. narrative chaining
- B. acronym
- C. chunking
- D. acrostic

Question 56

Mrs Jones found that her students were not making any effort to learn the order of the planets. She decided to give a chocolate bar to any student who could recall the order of the planets correctly. Amelia saw Edward receive a chocolate bar and this motivated her to learn the order.

Amelia's behaviour is a result of

- A. operant conditioning.
- B. classical conditioning.
- C. observational learning.
- D. trial-and-error learning.

Question 57

Ebbinghaus is known for his work on the features of the forgetting curve.

When Ebbinghaus tested the ability to recall nonsense syllables, he found that the rate of forgetting was

- A. steady for the first two days followed by little decline after that.
- B. slow for the first 8 hours followed by a rapid decline for two days.
- C. slow for the first 20 minutes followed by a rapid decline for two days.
- D. rapid for the first 30 minutes, then slowing with little decline after two days.

Use the following information to answer Questions 58 and 59.

Dr Unglik conducted a study on the effectiveness of different types of encoding. Participants were divided into three groups. Each group was presented with the same list of 20 words in a fixed order and was given 90 seconds to memorise the words using one of the following encoding strategies.

Group 1 memorised words by remembering whether each of the words was written in upper or lower case.

Group 2 memorised the words by pairing each word with a rhyming word.

Group 3 memorised the words by placing them in meaningful sentences.

Immediately following the 90-second study period, Dr Unglik asked the participants to use free recall to say the words they could remember from the word list.

Question 58

According to Craik and Lockhart's levels of processing model of memory, the type of encoding for each of the groups in Dr Unglik's study was

- A. Group 1: phonemic (acoustic); Group 2: structural (visual); Group 3: semantic.
- B. Group 1: structural (visual); Group 2: phonemic (acoustic); Group 3: semantic.
- C. Group 1: semantic; Group 2: phonemic (acoustic); Group 3: elaborative.
- D. Group 1: phonemic (acoustic); Group 2: elaborative; Group 3: semantic.

Question 59

Dr Unglik plotted recall performance for each word according to the order in which it had been presented in the study list.

The most likely result of Dr Unglik's study was that for all three groups he found that the word recall was

- A. the same for words at the start, in the middle and at the end of the study list.
- B. better for words at the start and at the end of the study list than for those in the middle.
- C. better for words at the end of the study list than for words at the start and in the middle.
- D. better for words at the start of the study list than for words in the middle and at the end.

Question 60

Richard has just switched off his alarm clock yet he can still hear the sound of it ringing.

This effect is due to

- A. episodic memory.
- B. working memory.
- C. iconic memory.
- D. echoic memory.

Question 61

Alanah is looking through her atlas for a suitable outline map of New Zealand to trace.

Her ability to recognise New Zealand is a function of her

- A. echoic memory.
- B. semantic memory.
- C. episodic memory.
- D. procedural memory.

Question 62

In an experiment, debriefing of participants most likely includes information about

- A. each participant's own results in the study.
- B. the individual results of other participants in the study.
- C. the number of hours participants will be expected to participate.
- D. the procedures that will be required of participants during the experiment.

NO WRITING ALLOWED IN THIS AREA

Use the following information to answer Questions 63–65.

Dr Goode conducted an experiment to investigate the claim that a particular herb helps people to focus their attention. She used an independent-groups design experiment with randomly allocated participants. The participants were not told whether they had been allocated to the experimental group or the control group.

She began with a test of attention (attention test A) to establish a baseline measure for all participants. Then, for the experiment, all participants were given a drink of water in identical cups. The drinks given to the experimental group also contained the herb, which was both odourless and tasteless.

Finally, all participants sat a different version of the attention test (attention test B).

The results of attention test B indicated that the experimental group had improved its ability to focus attention compared to the initial baseline measure, but the control group had not. The results were statistically significant.

Question 63

Dr Goode used a single blind procedure to control for

- A. placebo effects.
- B. practice effects.
- C. individual differences.
- D. experimenter expectations.

Question 64

It is likely that the results of this experiment were due to

- A. the effect of the independent variable on the dependent variable.
- B. the effect of the dependent variable on the independent variable.
- C. lack of counterbalancing.
- D. the order effect.

Question 65

To control for experimenter expectations, Dr Goode could have used

- A. a repeated measures experimental design.
- B. an independent-groups experimental design with counterbalancing.
- C. an independent-groups experimental design with a double blind procedure.
- D. a matched-participants experimental design with a single blind procedure.

SECTION B – Short answer questions**Instructions for Section B**

Answer **all** questions in the spaces provided. Write using black or blue pen.

Question 1 (4 marks)

You are conducting research in a sleep laboratory, investigating how much time the average adult spends in rapid eye movement (REM) sleep. In order to detect whether a person is in REM sleep, you could use an electromyograph (EMG) and a video monitoring device.

Explain how each device may indicate that the person is in REM sleep.

EMG _____

video monitoring _____

Question 2 (3 marks)

Describe one finding of Sperry and Gazzaniga's split brain studies and explain how it has contributed to our understanding of the interaction between cognitive processes and the structure of the brain.

SECTION B – continued

NO WRITING ALLOWED IN THIS AREA

Question 3 (3 marks)

A researcher wanted to investigate whether chronic sleep deprivation causes stress. In particular, she planned to test whether reduced sleep would result in a significant increase in stress levels at the end of 12 months.

The researcher planned to select 100 healthy participants between the ages of 18 and 40, and record their stress levels on a self-report rating scale. She allocated them randomly to either the experimental group or to the control group.

The experimental group would have their sleep time reduced to five hours per night while the control group would maintain a sleep time of seven to ten hours per night.

- a. Identify one advantage of using the self-report rating scale as a method of data collection in this study. 1 mark

- b. What was the benefit of the researcher using random allocation? 1 mark

- c. Identify one other possible effect of chronic sleep deprivation at the end of this study. 1 mark

Question 4 (2 marks)

After a night of heavy drinking at a party, Tom is in an alcohol-induced state of consciousness. A personal breathalyser showed his blood alcohol level to be extremely high.

Name and describe two psychological characteristics that Tom is likely to experience in this state. Your answer must identify how these characteristics differ from normal waking consciousness.

1.

2.

Question 5 (2 marks)

Describe **two** characteristics that differentiate mental health from mental illness.

Question 6 (2 marks)

Describe one advantage of using a dimensional approach to classify mental disorders compared with using a categorical approach.

Question 7 (7 marks)

Stella and Audrey are both 17 years old. They are both preparing to compete in an interstate athletics competition. Stella is feeling overwhelmed by the demands involved in training and preparing for the competition, and has had difficulty sleeping. Audrey, however, is enjoying all the preparation and is finding the training challenging but manageable.

- a. In terms of primary appraisal in Lazarus and Folkman's Transactional Model of Stress and Coping, explain why Stella and Audrey have evaluated their situations differently.

4 marks

- b.** Explain how biofeedback could help Stella to reduce her level of stress.

3 marks

Question 8 (4 marks)

- a.** What is a biopsychosocial framework?

2 marks

- b.** Explain how biopsychosocial frameworks have changed the way health professionals consider health and wellbeing.

2 marks

SECTION B – continued
TURN OVER

NO WRITING ALLOWED IN THIS AREA

Question 9 (3 marks)

Adam fell off a ladder while climbing onto the roof of his house. Brain scans showed damage to the left parietal lobe of his brain.

- a. Describe one difficulty that Adam might experience as a result of the damage to his left parietal lobe. 1 mark

- b. Adam's doctors explained to his family that adaptive plasticity might occur after some time.

- i. What is adaptive plasticity?

1 mark

- ii. How might adaptive plasticity affect Adam?

1 mark

Question 10 (2 marks)

John Watson's 'Little Albert' experiment was famous for advancing our understanding of classical conditioning in humans and also for the ethical issues it raised.

Describe **two** ethical principles that the original study would breach if it were carried out today.

NO WRITING ALLOWED IN THIS AREA

NO WRITING ALLOWED IN THIS AREA

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NO WRITING ALLOWED IN THIS AREA

Question 13 (3 marks)

Zoe wants to become a veterinary nurse, but she has a fear of cats. She sees a psychologist, who recommends using a therapy called graduated exposure to learn to overcome her fear.

a. What kind of learning is involved in graduated exposure? 1 mark

b. With reference to psychological terms, explain the process of graduated exposure that might be used to assist Zoe. 2 marks

NO WRITING ALLOWED IN THIS AREA

Question 14 (5 marks)

A researcher was interested in exploring the potential for eyewitness testimonies to be manipulated through leading questioning. To investigate this issue, he had two groups (group A and group B), each with 50 participants, watch a film showing a fight between two gangs. One gang was dressed in blue and the other in red. The film showed an equal number of aggressive acts committed by the red and blue gangs.

After watching the film, participants in group A were asked a series of leading questions, such as 'Why do you think the red gang was more aggressive than the blue gang?' Group B was asked neutral questions, such as 'What do you remember about the fight?' After the questions had been completed, the researcher asked participants in both groups to estimate the number of aggressive acts performed by each gang. The significance level for the research was set at $p < 0.05$.

The results showed that participants in group A, on average, estimated that the red gang committed more aggressive acts than the blue gang, whereas those in group B, on average, estimated an equal number of aggressive acts committed by both gangs. A statistical test comparing the mean difference estimates for groups A and B indicated that $p = 0.03$.

- a. What is meant by $p = 0.03$? 1 mark

- b. What conclusion could the researcher draw from these results? 2 marks

- c. How would Loftus's research into the manipulation of eyewitness accounts help to explain these results? 2 marks

Question 15 (4 marks)

Olga is a happy, active and healthy 70-year-old woman. At a school reunion, an old friend asks if she can remember an incident that occurred at Olga's 21st birthday party. However, Olga is unable to remember the event.

Explain why Olga may have forgotten this incident in terms of both decay theory and motivated forgetting theory.

decay theory _____

motivated forgetting theory _____

Question 16 (2 marks)

According to the semantic network theory, how is information retrieved from long-term memory?

NO WRITING ALLOWED IN THIS AREA

Question 17 (3 marks)

Max has been diagnosed with Alzheimer's disease.

- a. Identify and explain one change that could be occurring in Max's brain.

2 marks

- b. Max's family have noticed changes to his personality.
Which lobe of the brain is likely to be affected?

1 mark

Question 18 (3 marks)

- a. Draw and label a neuron in the box below.

2 marks



- b. Describe one change that occurs to a neuron when a new memory is formed.

1 mark

**END OF SECTION B
TURN OVER**

NO WRITING ALLOWED IN THIS AREA

SECTION C – Research scenario**Instructions for Section C**

Answer the questions in the spaces provided. Write using black or blue pen.

Your responses may include diagrams, charts and tables.

Dr Nicholls is a psychologist interested in how the organisation of concepts in semantic memory might affect the recall of learned information. She predicts that people will recall more words from a studied list if the words are paired with words that are related in meaning.

To investigate this issue, Dr Nicholls designed a memory experiment in which **all** participants were presented with the same list of 60 pairs of words to learn.

Half of the word pairs in the study list were **related** in meaning (for example, cat–dog, nurse–doctor, apple–orange) and the other half were **unrelated** in meaning (for example, paper–shirt, window–butter, tree–hammer).

After studying the pairs of words, the participants were presented with the first word from each pair as a cue and were required to recall the second word.

Dr Nicholls determined that the results would be significant if the p value obtained was less than 0.05.

Twenty first-year university students volunteered to participate in the experiment.

The experiment consisted of a study phase and a test phase.

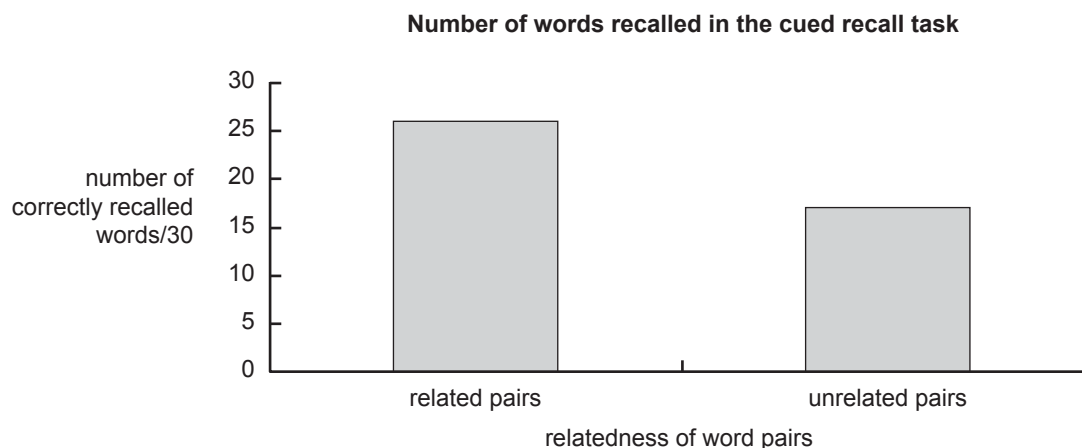
Study phase – All participants were asked to read aloud each of the 60 word pairs in the study list.

- Half of the participants studied the 30 **related** word pairs first, followed by the **unrelated** word pairs.
- Half of the participants studied the 30 **unrelated** word pairs first, followed by the **related** word pairs.

Test phase – The test phase immediately followed the study phase.

Participants were presented with the first word from each of the 60 word pairs as a cue for recall. Their task was to recall the word that had been paired with each cue word.

The results of Dr Nicholls's study are presented in the figure below. She conducted a statistical test to determine whether the difference between the means for the two experimental conditions was significant and found that $p = 0.02$.



SECTION C – continued

NO WRITING ALLOWED IN THIS AREA

Question 1 (2 marks)

Operationalise the dependent and independent variables in this experiment.

dependent variable _____

independent variable _____

Question 2 (1 mark)

What experimental design did Dr Nicholls use?

Question 3 (2 marks)

What is informed consent and why is it important in psychological research?

Question 4 (10 marks)

Construct a discussion containing

- the conclusion(s) based on the hypothesis (or hypotheses)
- the implications of the conclusion(s) for one theory of memory
- a description of the weaknesses of this experimental design and procedures to eliminate these.

NO WRITING ALLOWED IN THIS AREA

END OF SECTION C

[illegible]

[illegible]

END OF QUESTION AND ANSWER BOOK

The following is an example of an alternative set of questions based on the scenario on page 30 of the sample examination.

Question 1 (1 mark)

Identify the population in this study.

Question 2 (2 marks)

What conclusions could be drawn from these results?

Question 3 (2 marks)

To what extent can Dr Nicholls's findings be generalised to the population?

Question 4 (10 marks)

Dr Nicholls felt that her research design was the most suitable to use in this study.

Explain whether you agree or disagree with Dr Nicholls. In your answer you should

- identify the experimental research design that Dr Nicholls used
- discuss the strengths and limitations of Dr Nicholls's experimental research design compared with two other experimental research designs.

Answers to multiple-choice questions

Question	Answer
1	C
2	C
3	D
4	C
5	B
6	D
7	B
8	D
9	A
10	D
11	B
12	A
13	D
14	B
15	C
16	B
17	A
18	D
19	B
20	B
21	C
22	D
23	B
24	C
25	C

Question	Answer
26	A
27	B
28	B
29	A
30	D
31	A
32	D
33	C
34	C
35	D
36	D
37	B
38	B
39	C
40	D
41	C
42	A
43	B
44	B
45	A
46	B
47	B
48	A
49	C
50	A

Question	Answer
51	D
52	C
53	A
54	D
55	B
56	C
57	D
58	B
59	B
60	D
61	B
62	A
63	A
64	A
65	C